



US009679672B2

(12) **United States Patent**  
**Levi et al.**(10) **Patent No.:** **US 9,679,672 B2**(45) **Date of Patent:** **Jun. 13, 2017**(54) **LOW BAND GAP CONJUGATED  
POLYMERIC COMPOSITIONS AND  
APPLICATIONS THEREOF**(71) Applicant: **WAKE FOREST UNIVERSITY,**  
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Winston-Salem, NC (US)(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 225 days.(21) Appl. No.: **14/394,198**(22) PCT Filed: **Apr. 12, 2013**(86) PCT No.: **PCT/US2013/036451**

§ 371 (c)(1),

(2) Date: **Oct. 13, 2014**(87) PCT Pub. No.: **WO2013/155463**PCT Pub. Date: **Oct. 17, 2013**(65) **Prior Publication Data**

US 2015/0069302 A1 Mar. 12, 2015

**Related U.S. Application Data**(60) Provisional application No. 61/623,886, filed on Apr.  
13, 2012.(51) **Int. Cl.****H01B 1/12** (2006.01)**H01L 51/00** (2006.01)

(Continued)

(52) **U.S. Cl.**CPC ..... **H01B 1/127** (2013.01); **A61K 41/0052**  
(2013.01); **A61K 47/48192** (2013.01);

(Continued)

(58) **Field of Classification Search**

None

See application file for complete search history.

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## (57)

**ABSTRACT**In one aspect, electrically conductive conjugated polymeric  
compositions are described herein demonstrating compat-  
ibility with aqueous solvents and/or phases. The ability to  
provide aqueous compatible compositions from previously  
water insoluble conjugated polymeric systems, in some  
embodiments, can facilitate use of such systems in a variety  
of aqueous applications, including biological applications.**19 Claims, 21 Drawing Sheets**